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1/33

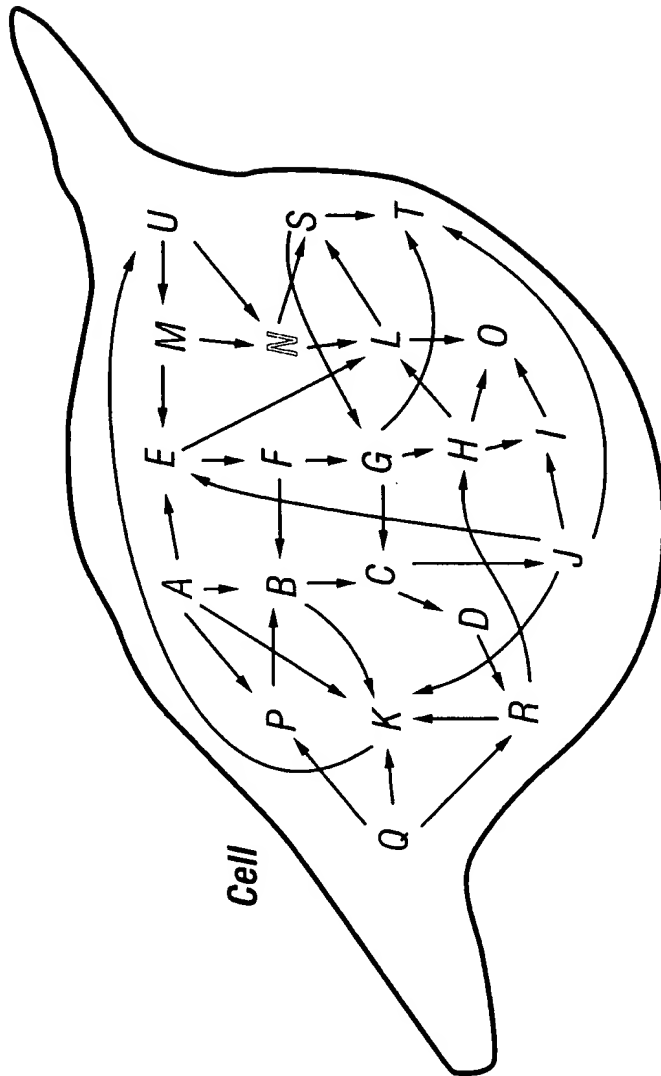


FIG. 1
(Prior Art)

2/33

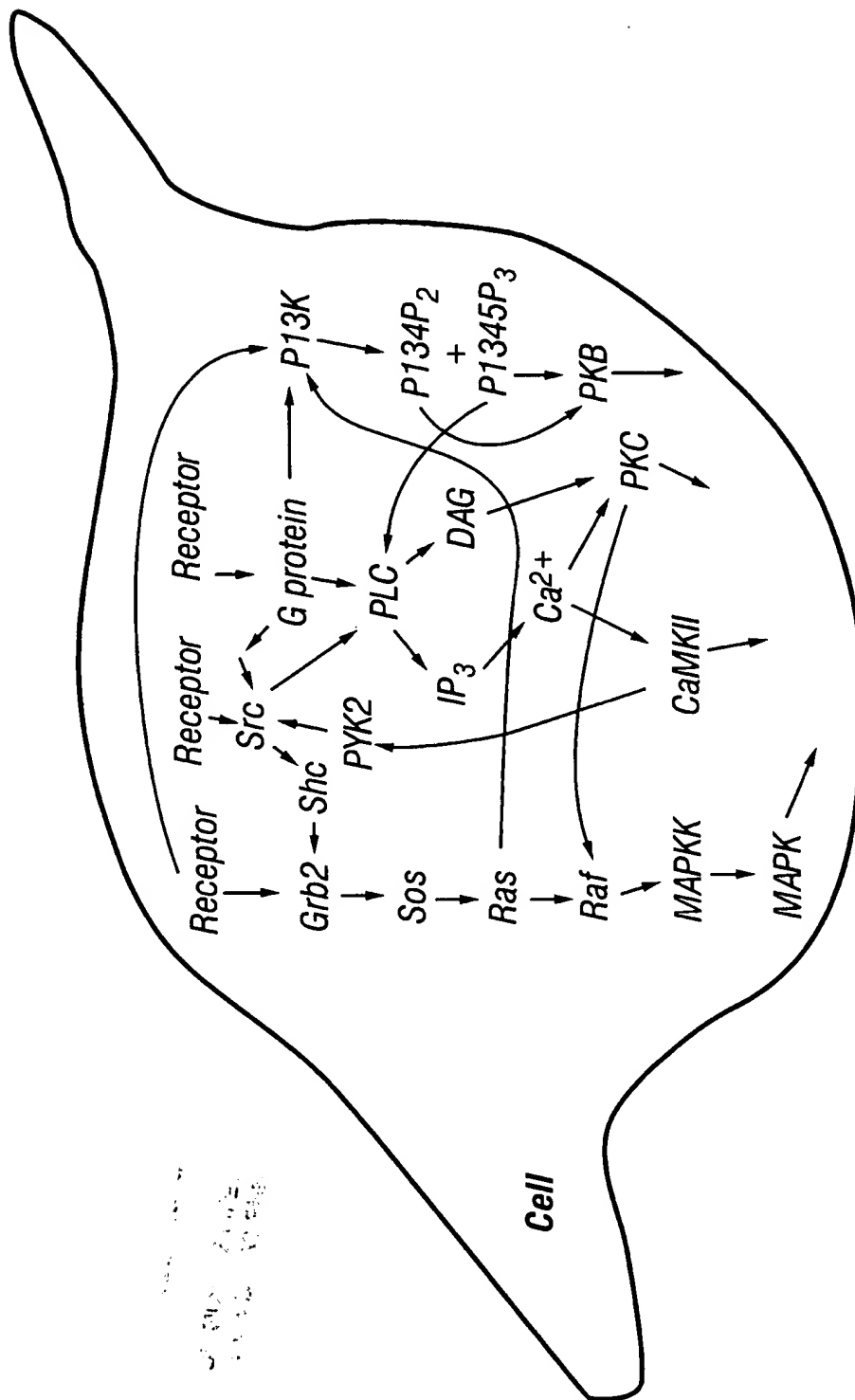


FIG. 2
(Prior Art)

3/33

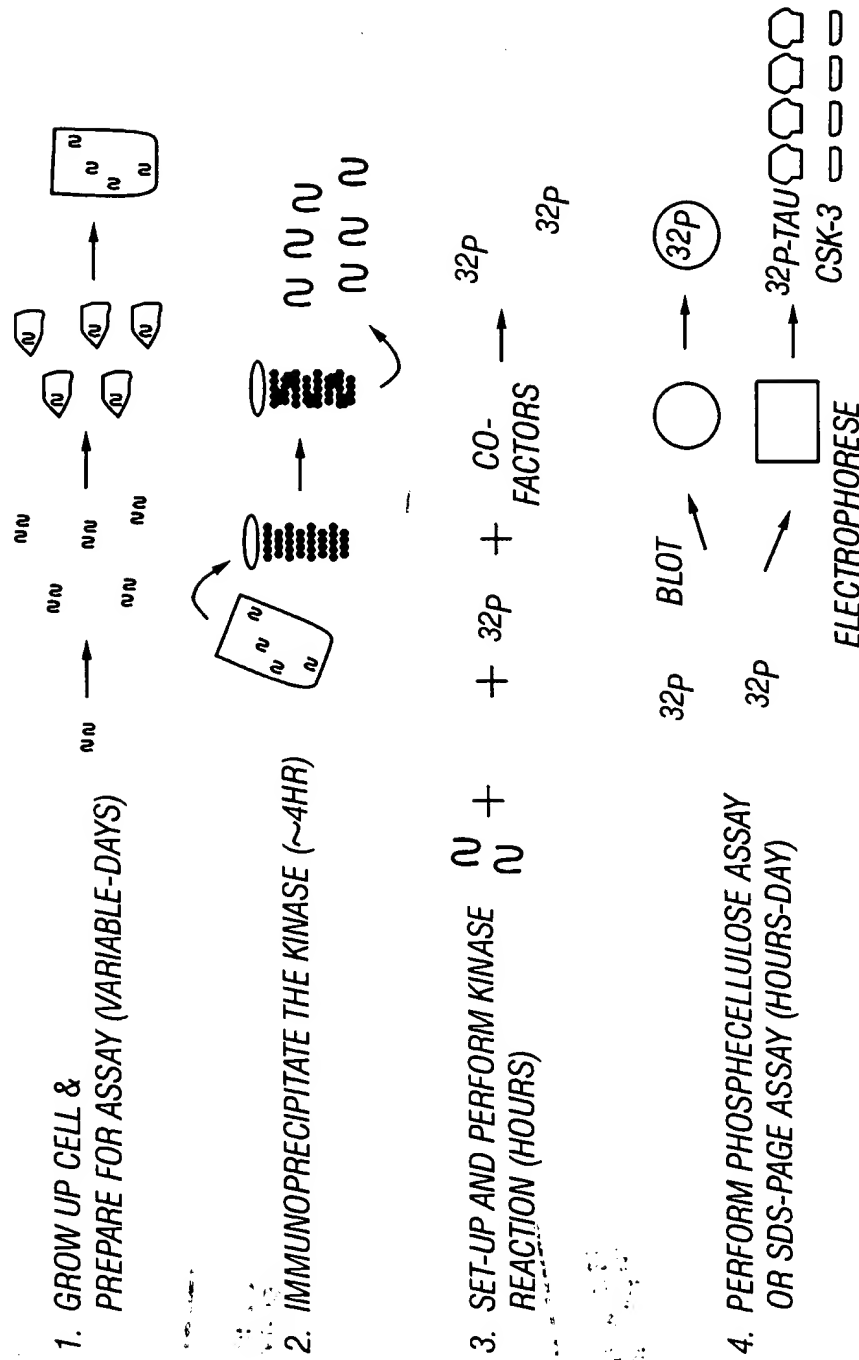
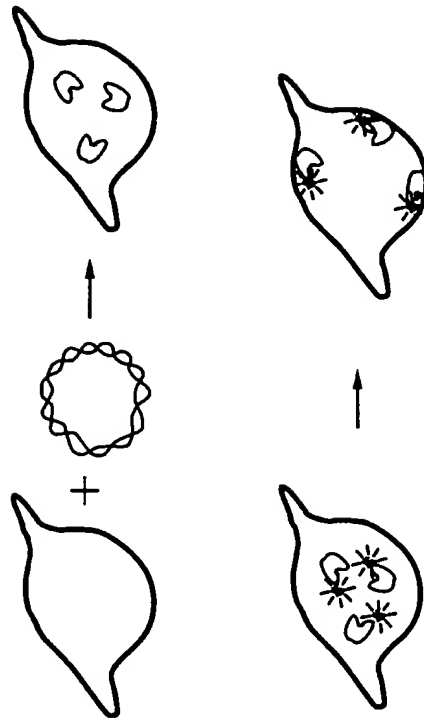


FIG. 3
 (Prior Art)

4/33



1. DEVELOP STABLY TRANSFECTED CELL
LINES CARRYING THE OVEREXPRESSED
GFP-TAGGED PROTEIN

2. FLUORESCENT IMAGING AND
PATTERN RECOGNITION

2. INFER PROTEIN ACTIVITY FROM
LOCATION

ASSAY TIME ~ MINUTES

FIG. 4
(Prior Art)

5/33

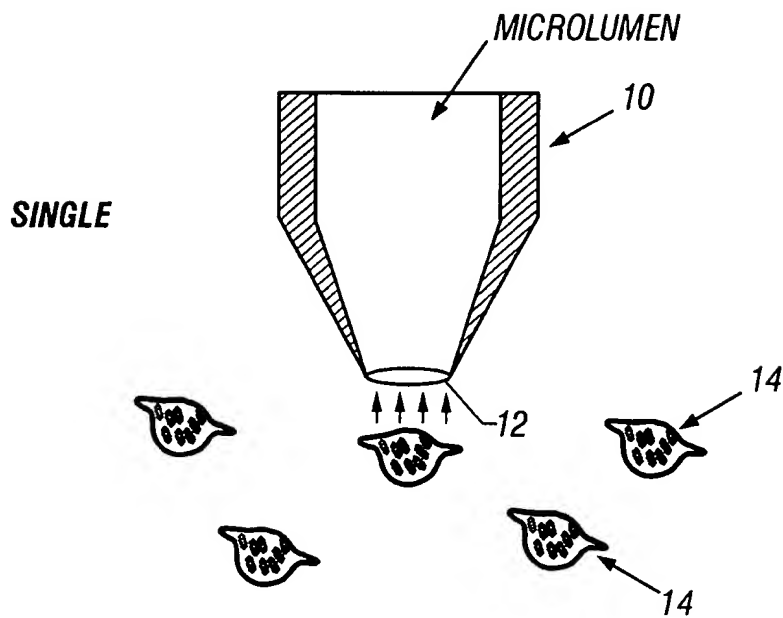


FIG. 5A-1

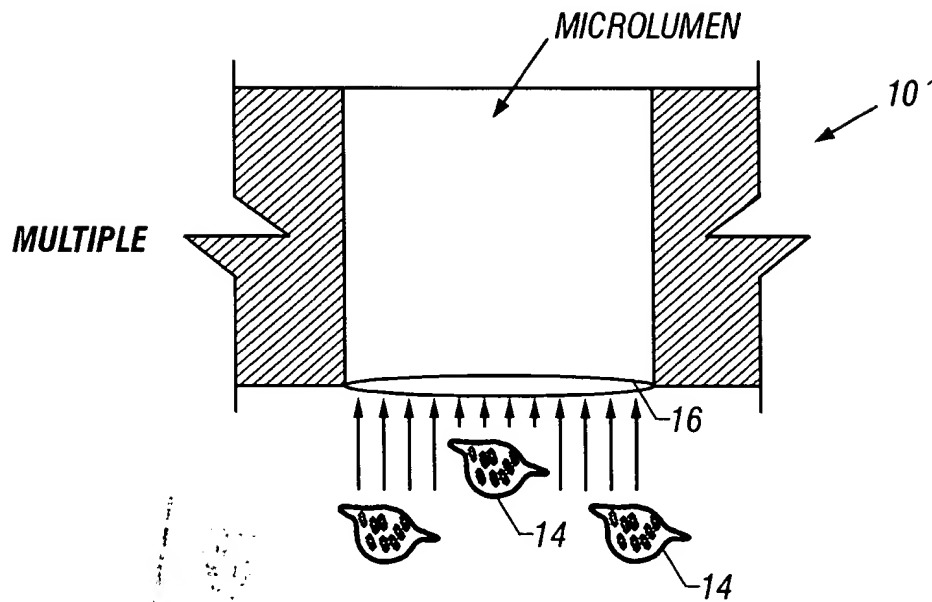


FIG. 5A-2

6/33

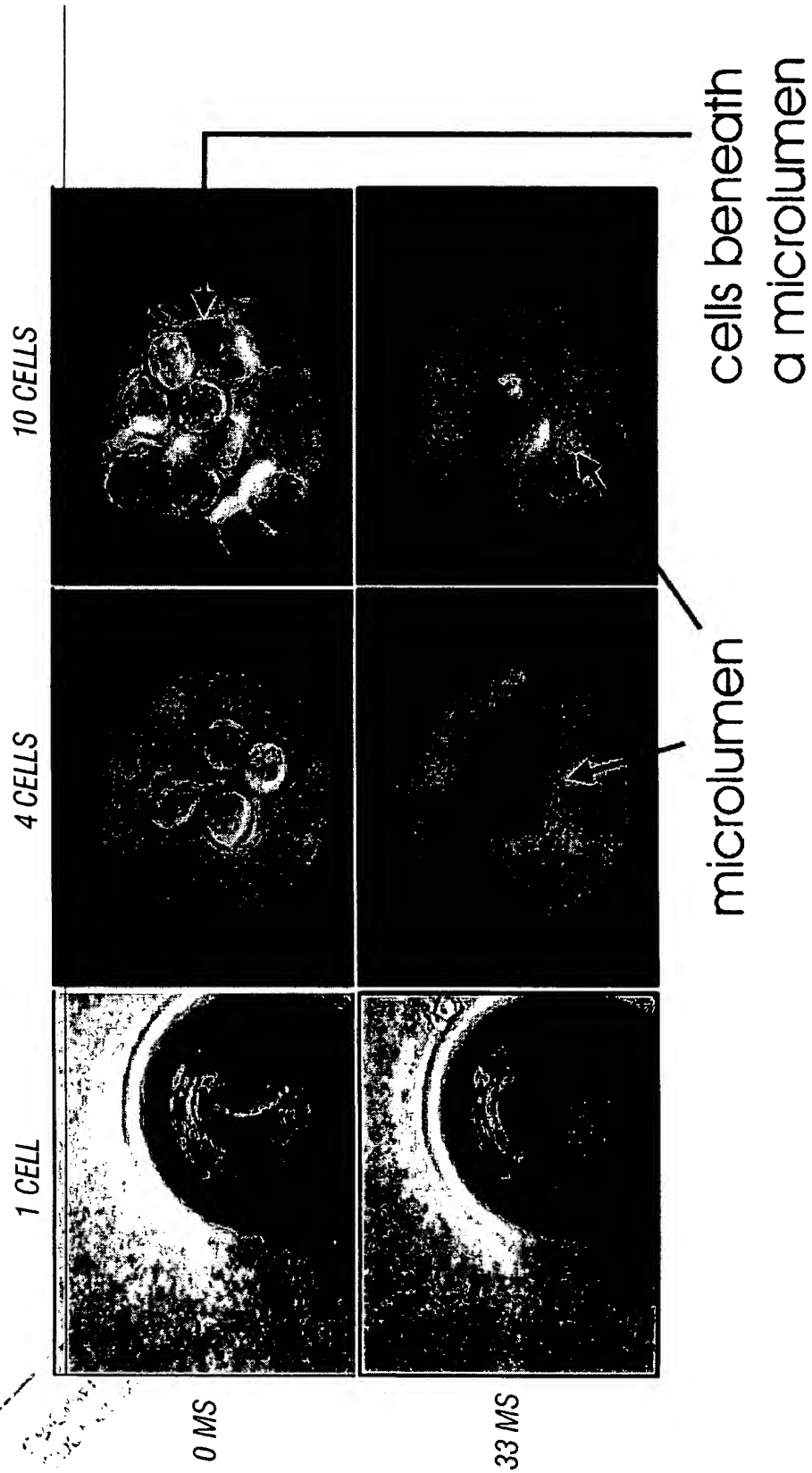


FIG. 5B

7/33

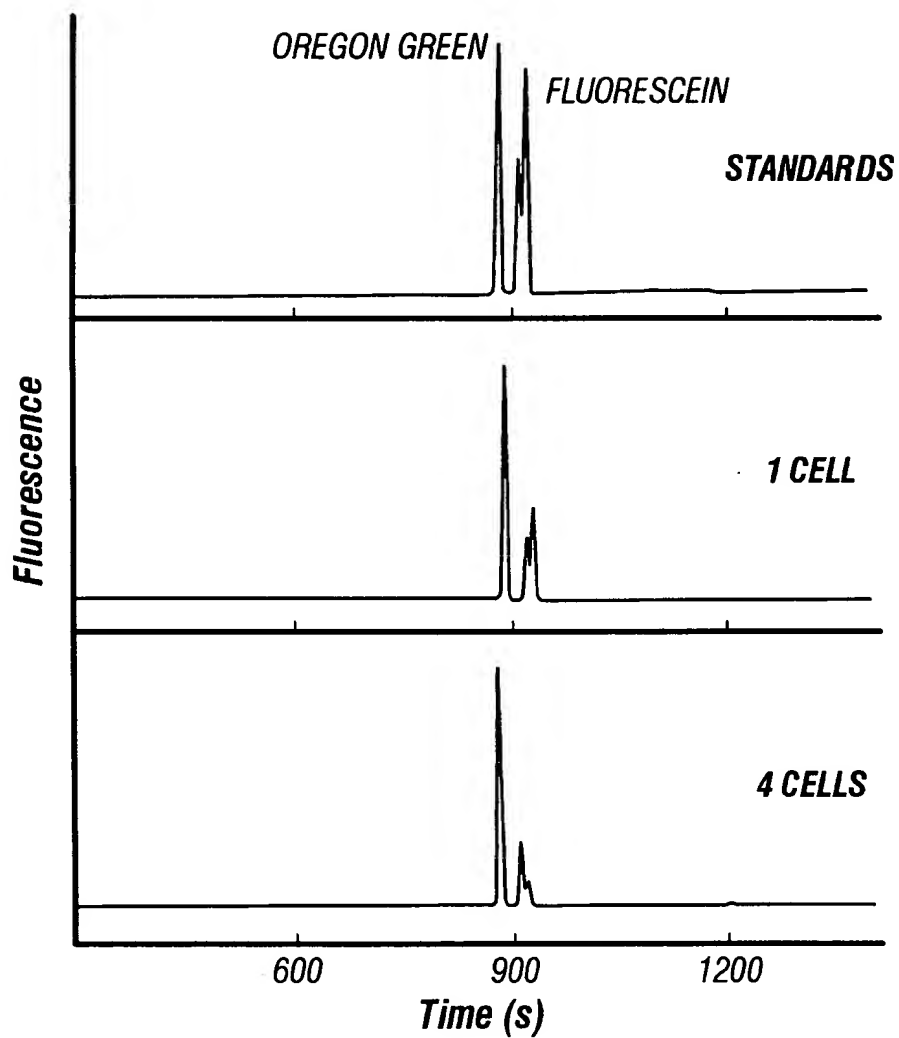
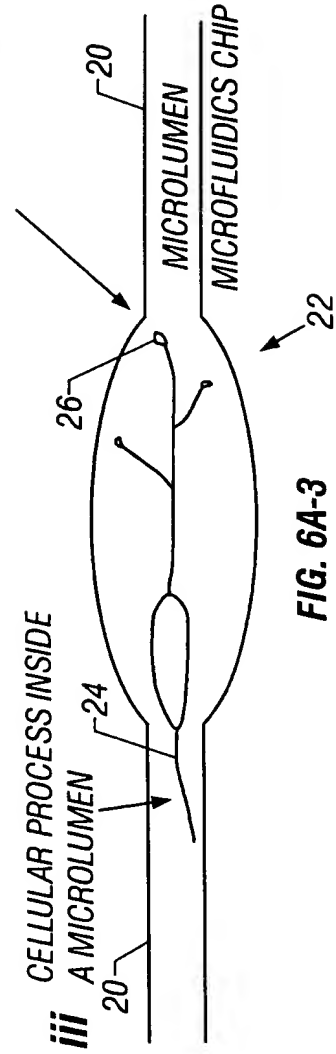
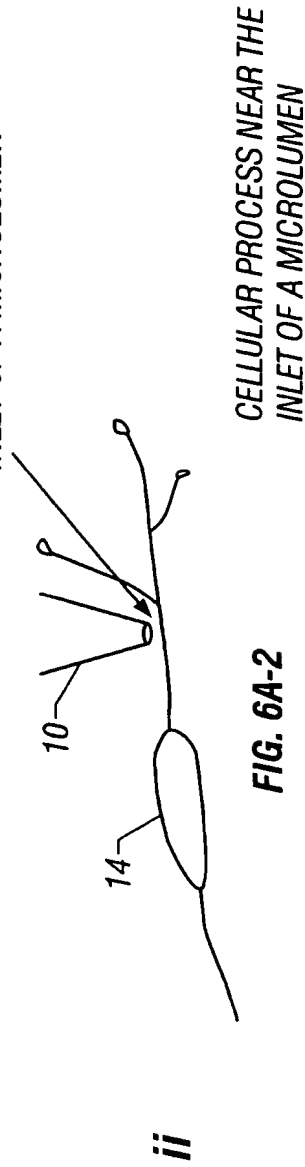
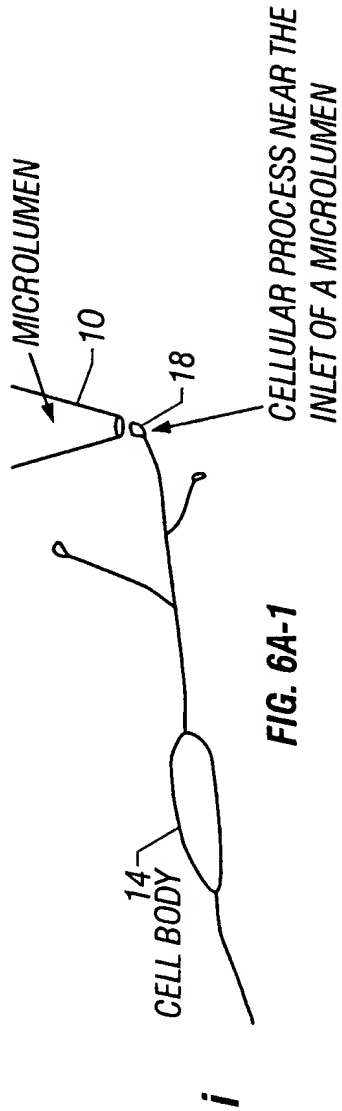


FIG. 5C

8/33



9/33

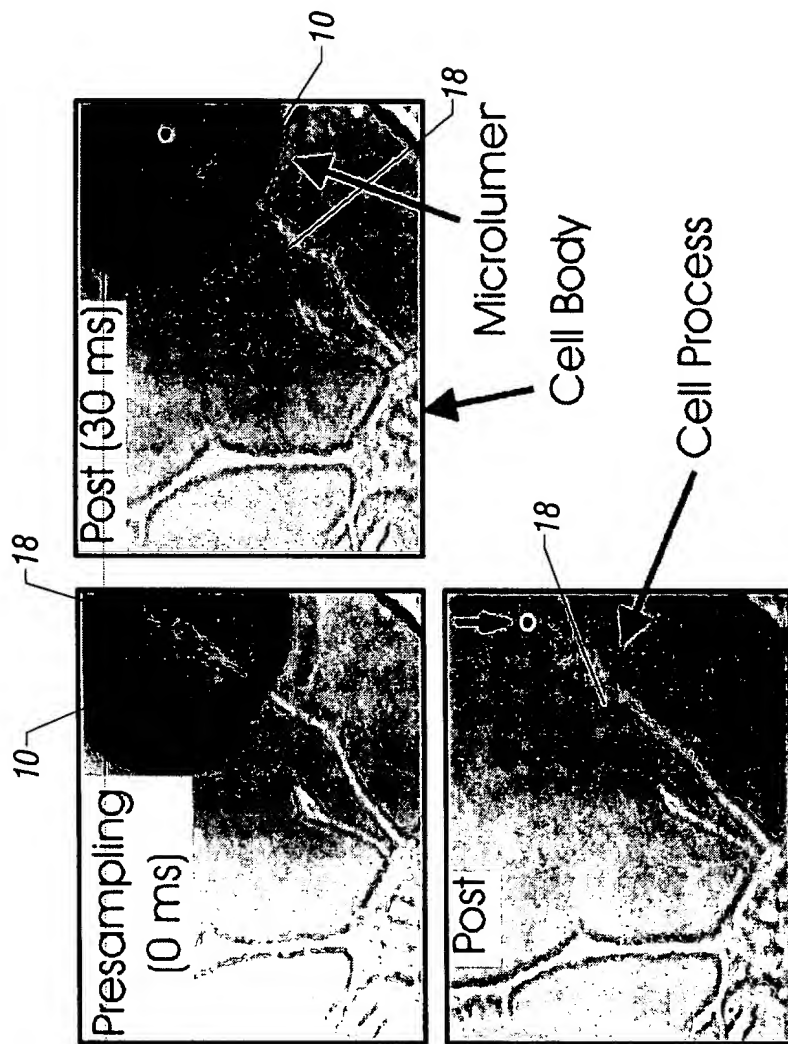


FIG. 6B

10/33

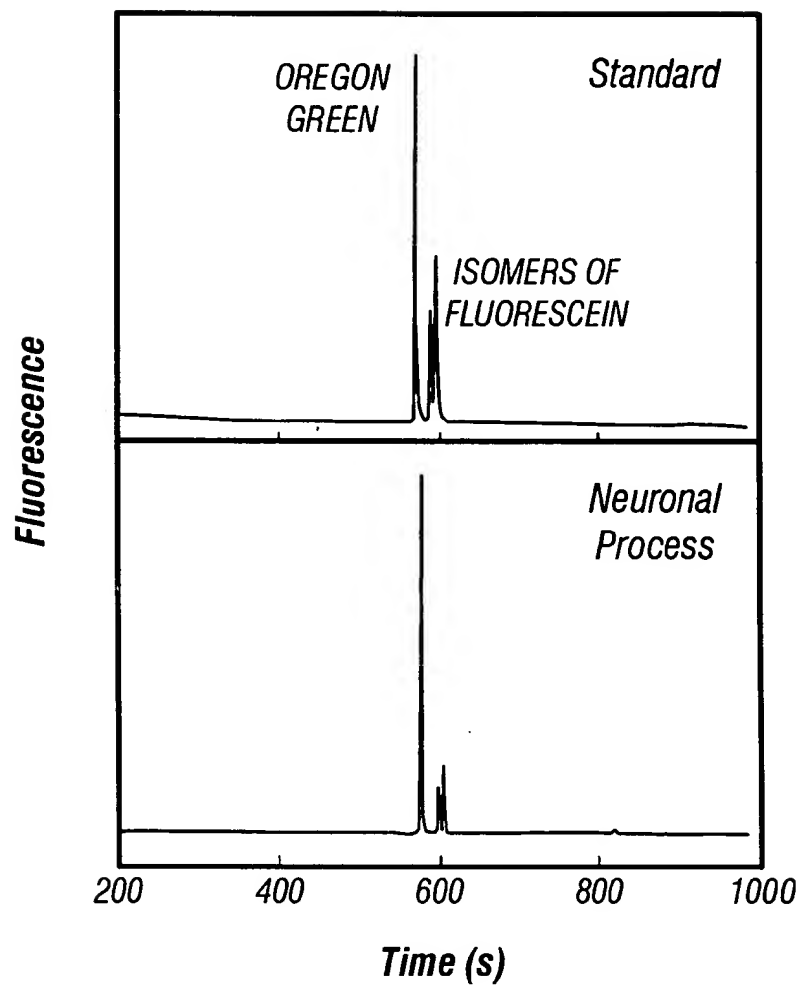


FIG. 6C

11/33

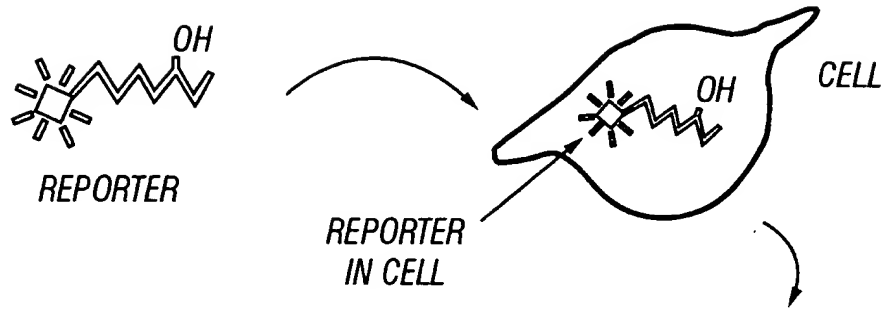


FIG. 7A

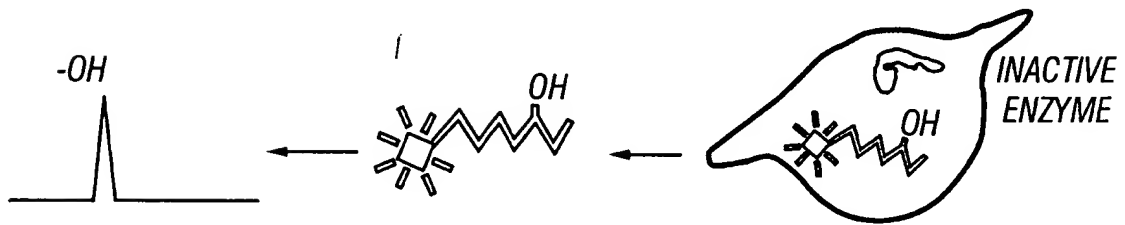


FIG. 7B

OR

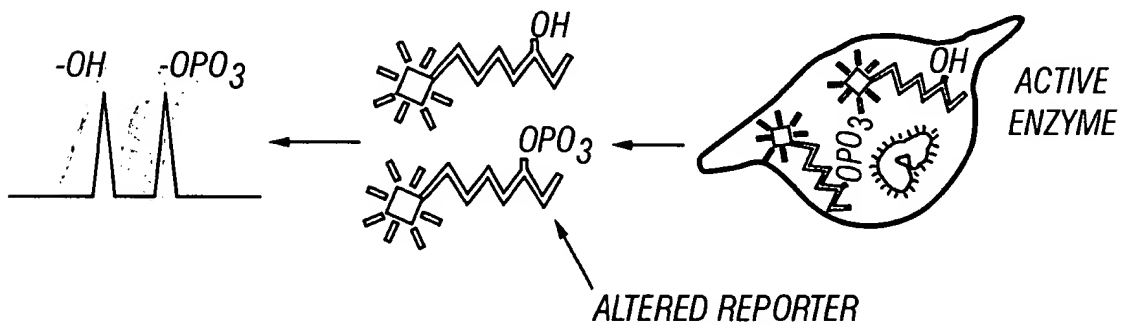


FIG. 7C

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12/33

Microinjection

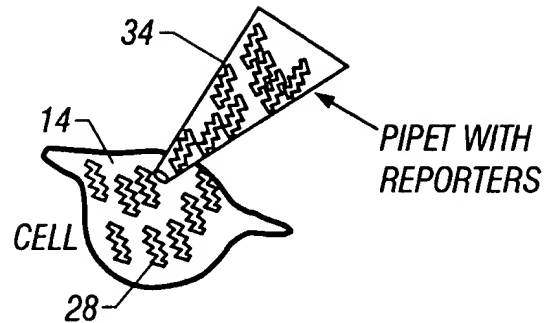


FIG. 8A

**Simple Lipid-Assisted
Microinjection**

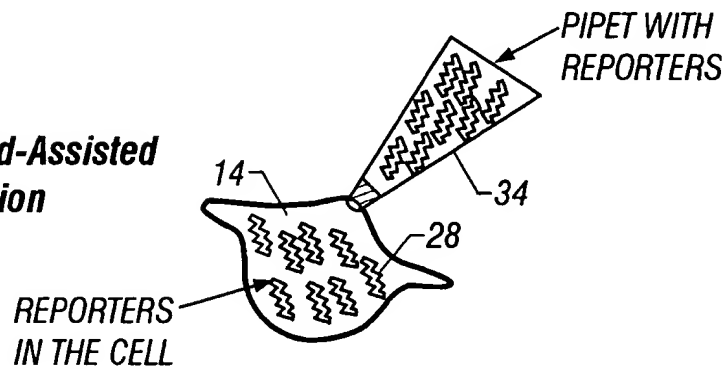


FIG. 8B

Optoinjection

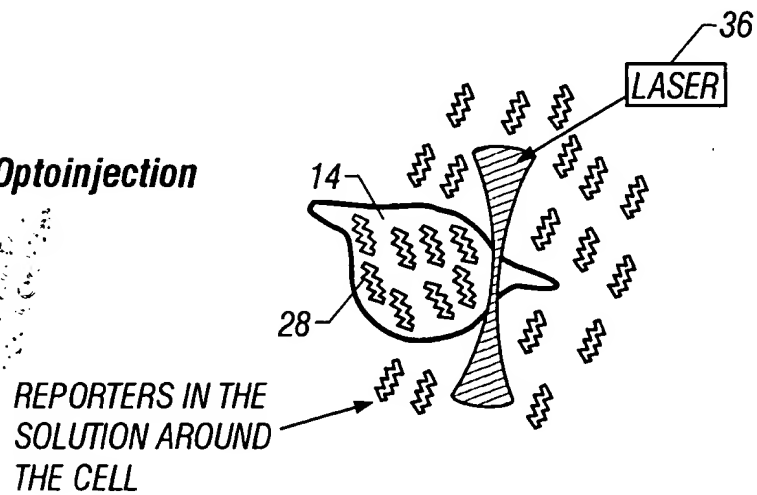


FIG. 8C

13/33

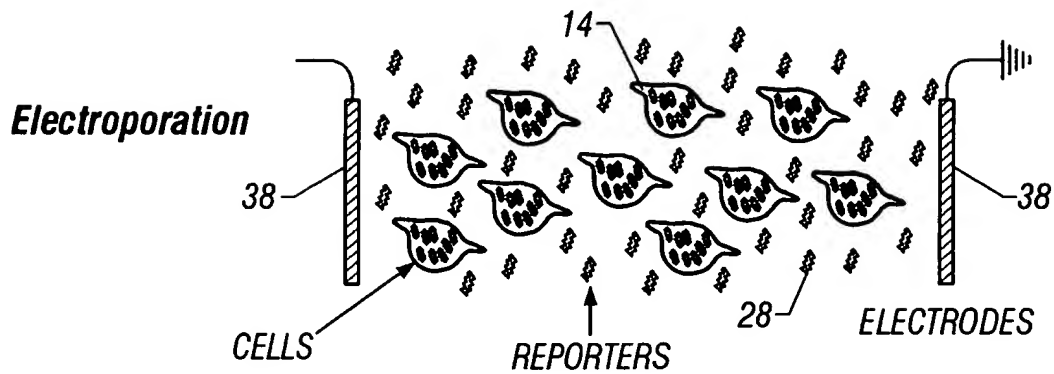


FIG. 9A

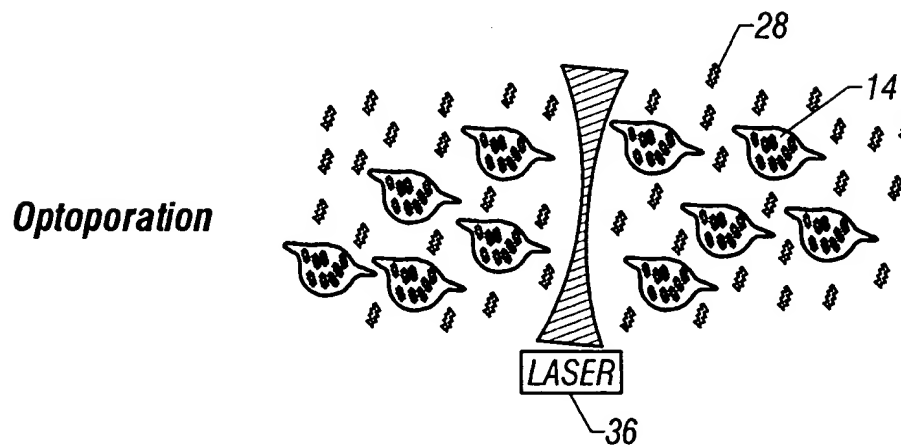


FIG. 9B

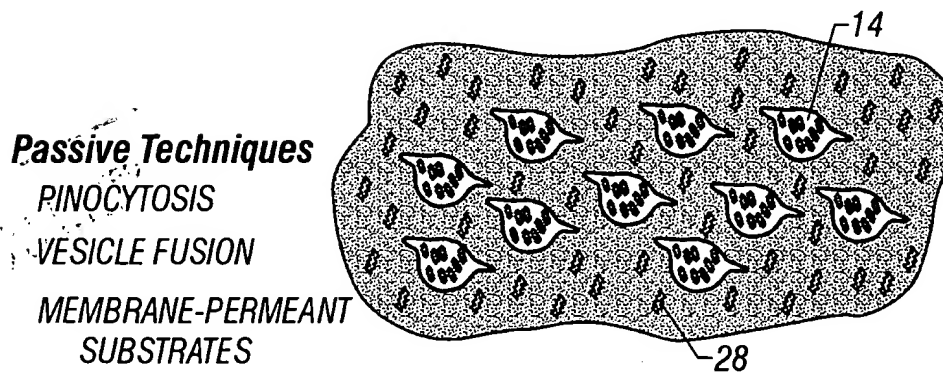
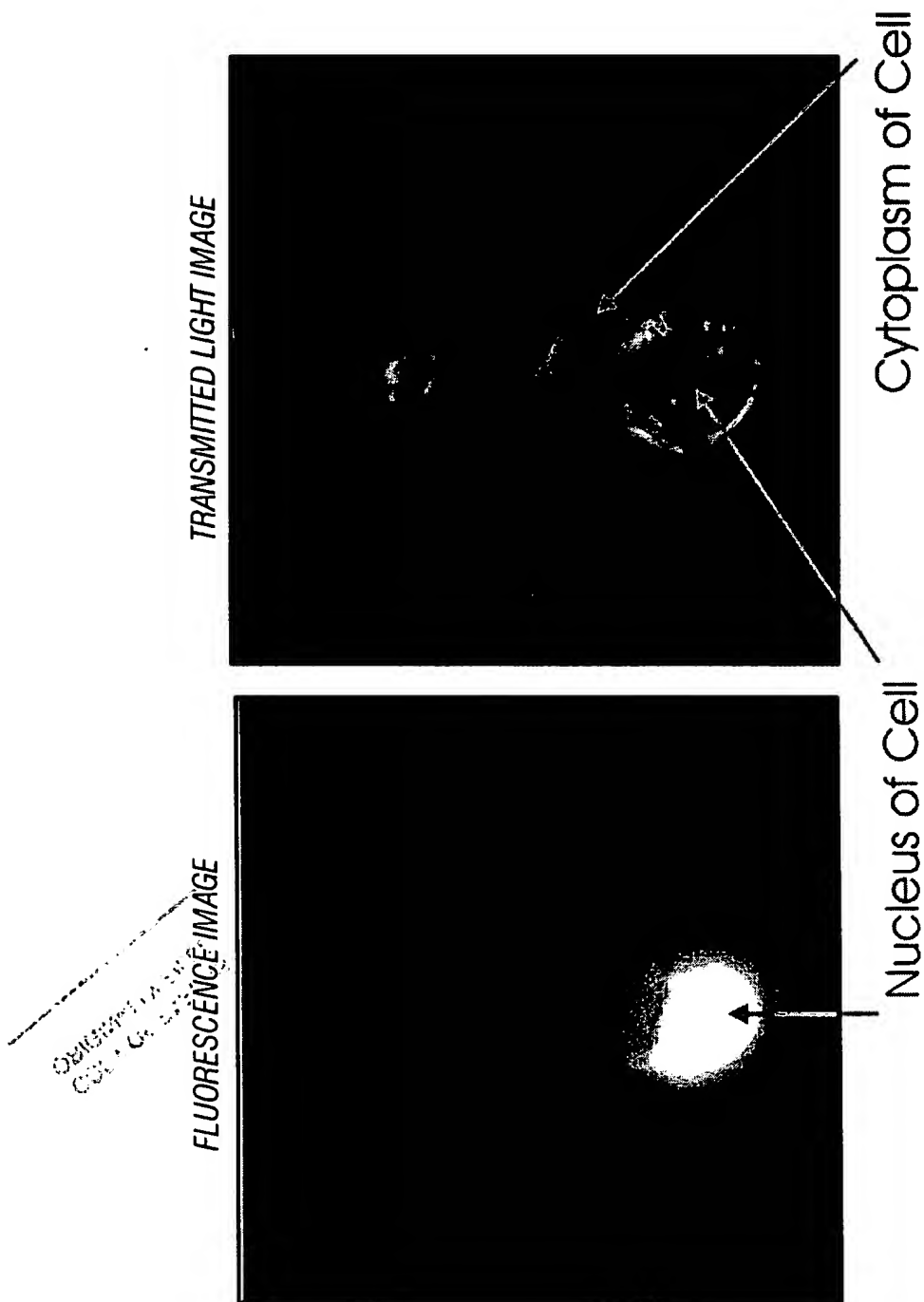


FIG. 9C

14/33



15/33

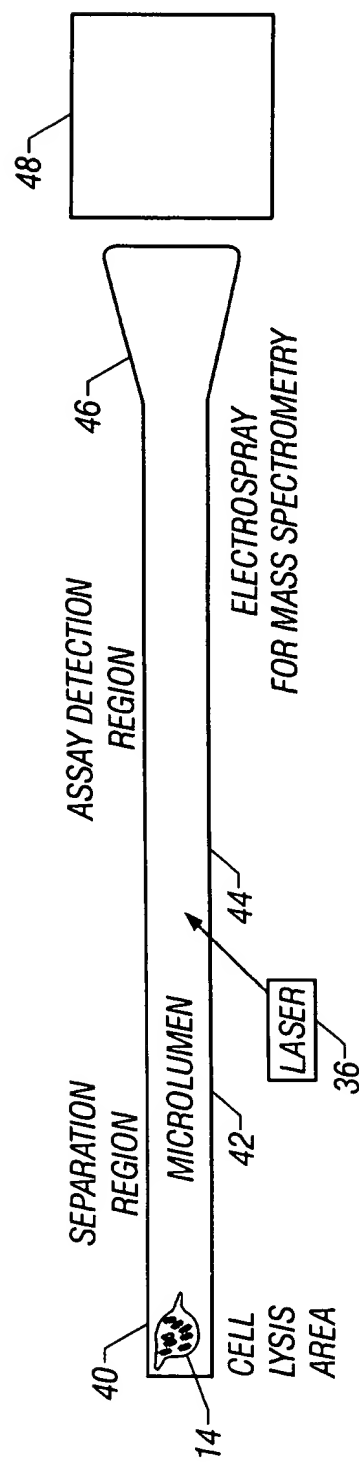


FIG. 11

16/33

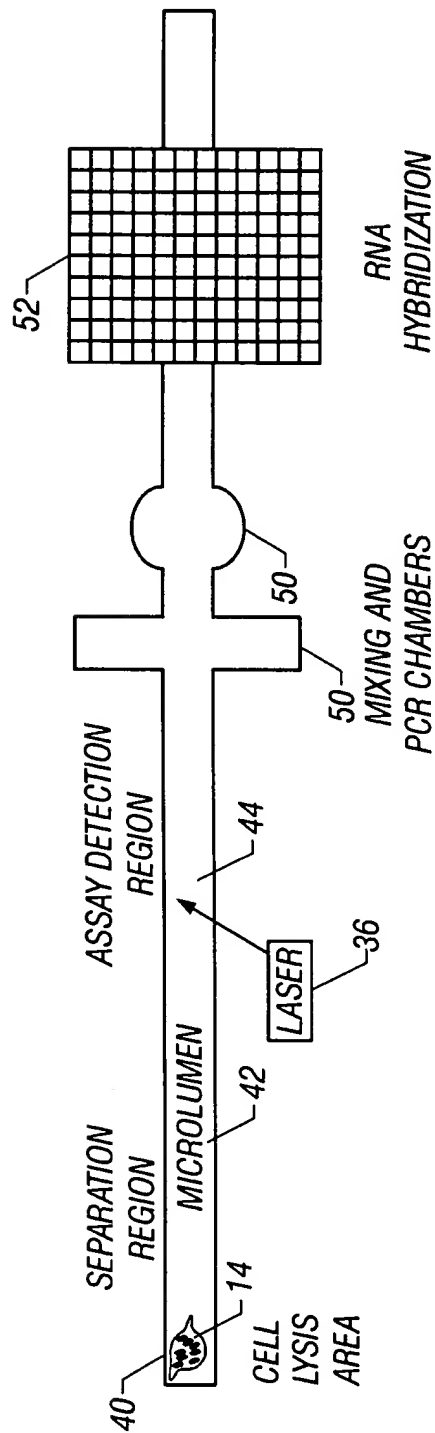


FIG. 12A

17/33

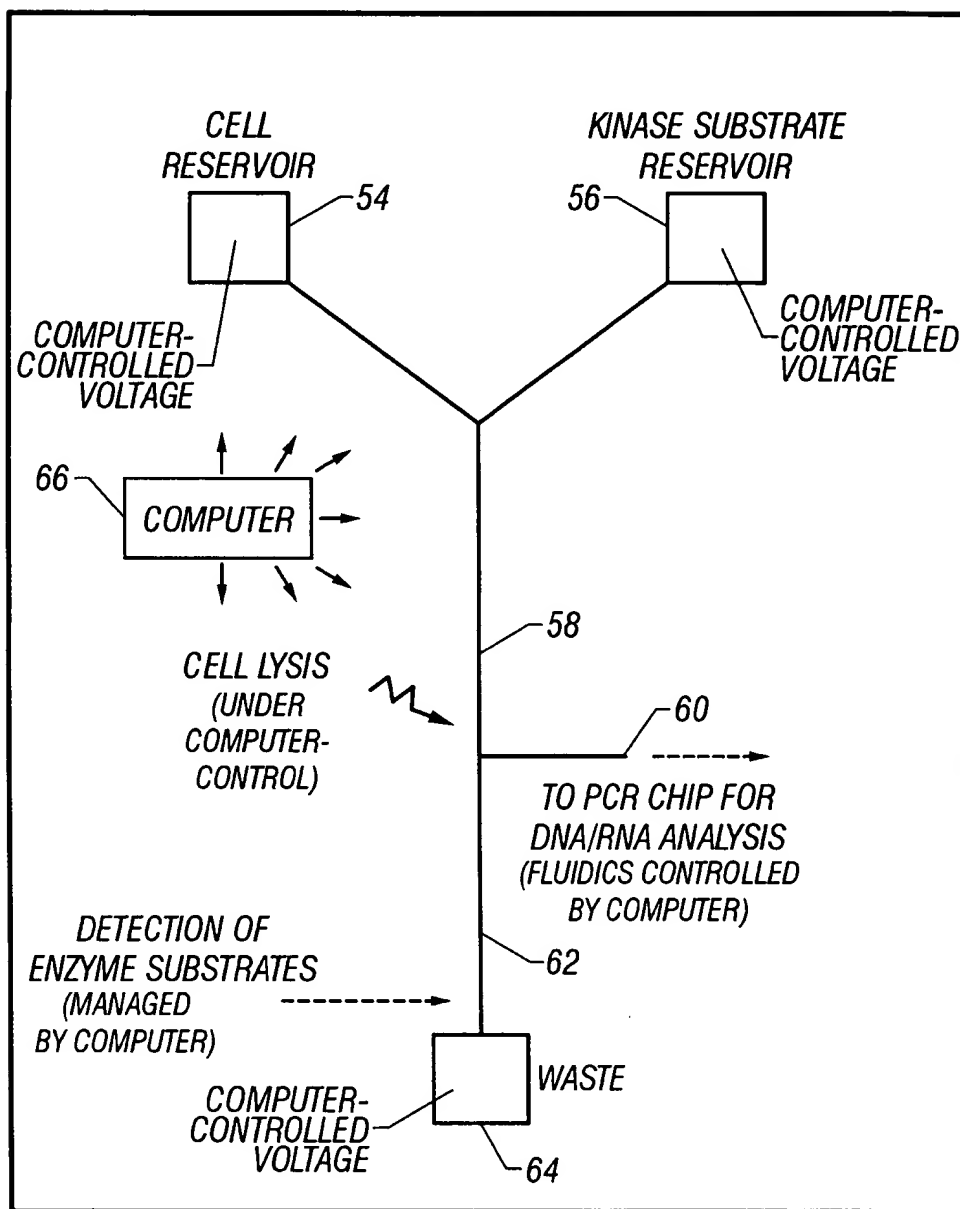


FIG. 12B

18/33

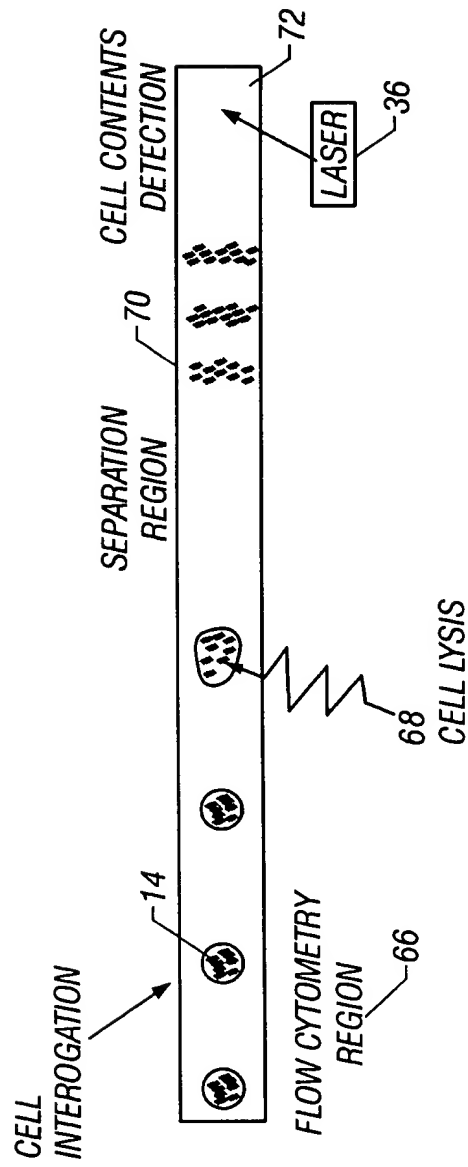


FIG. 13

19/33

Fluorescence Imaging

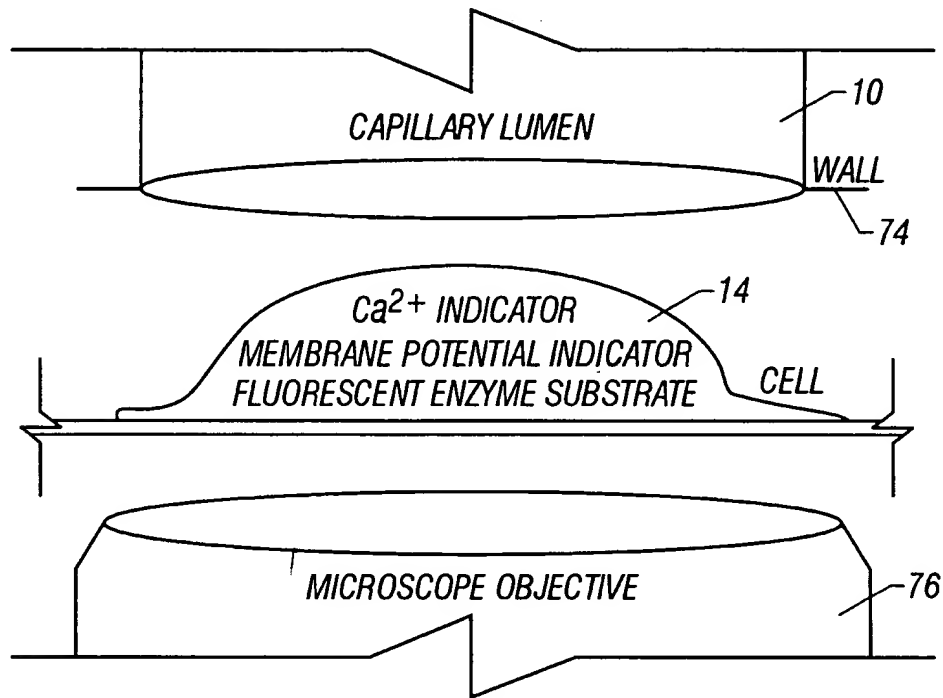


FIG. 14A

Patch Clamp

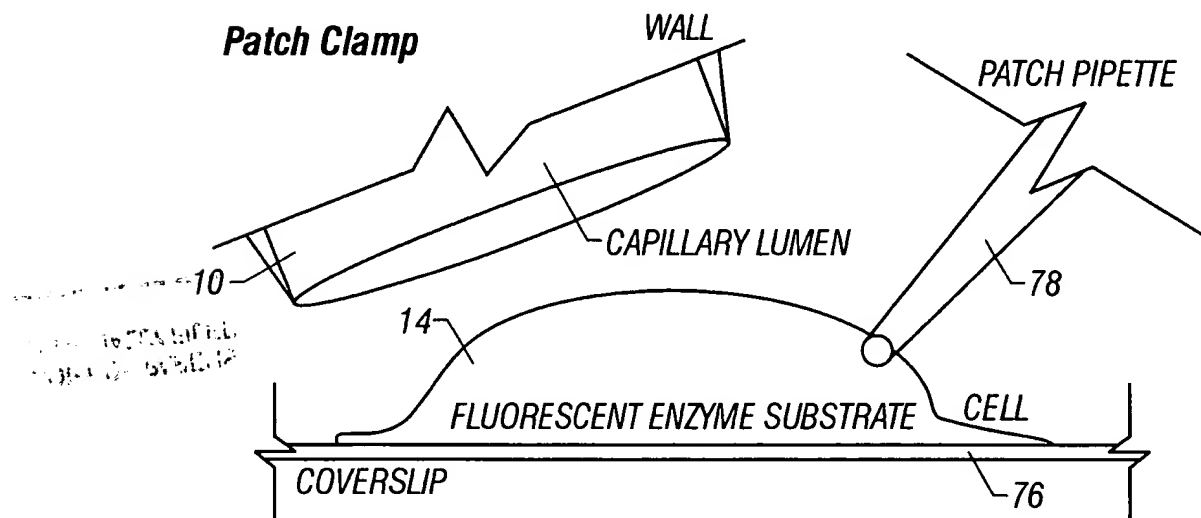


FIG. 14B

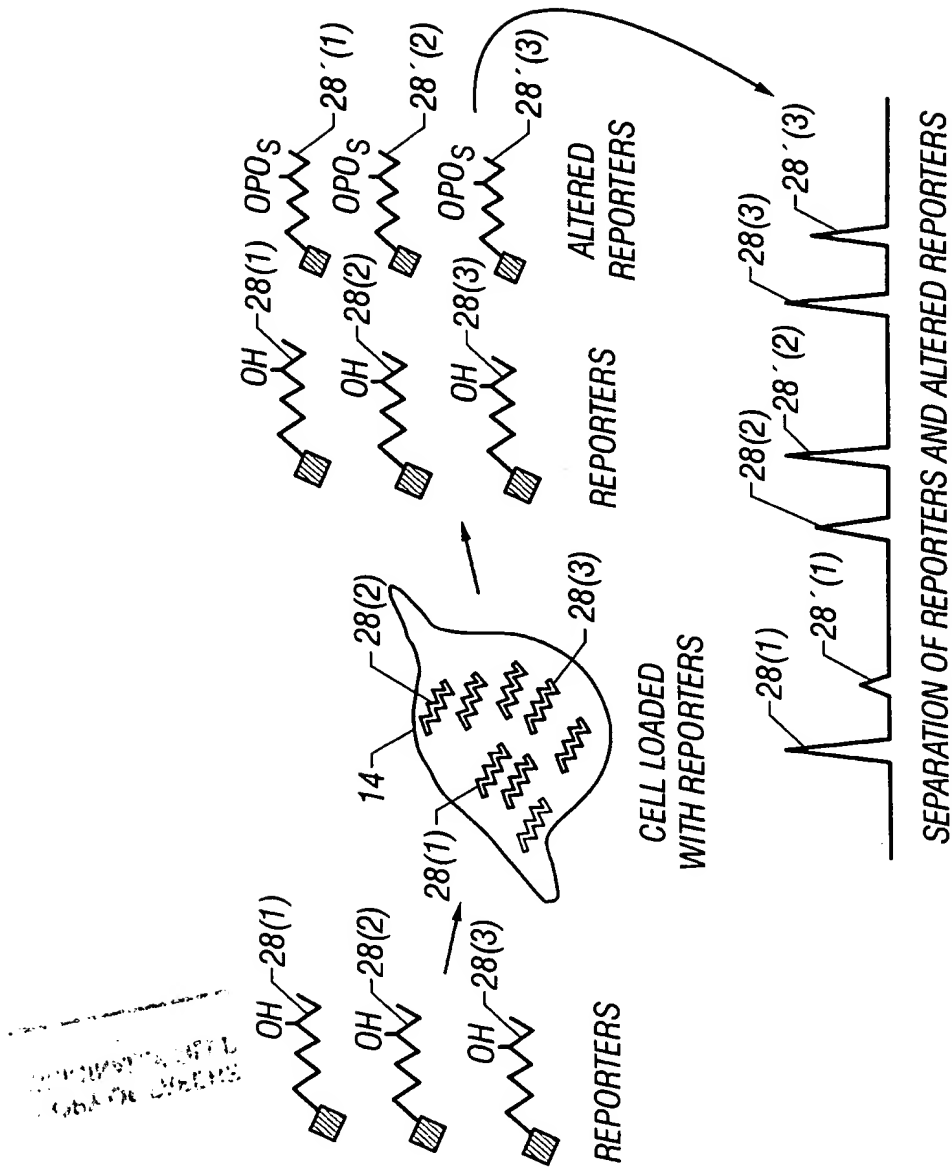


FIG. 15B



FIG. 18



20/33

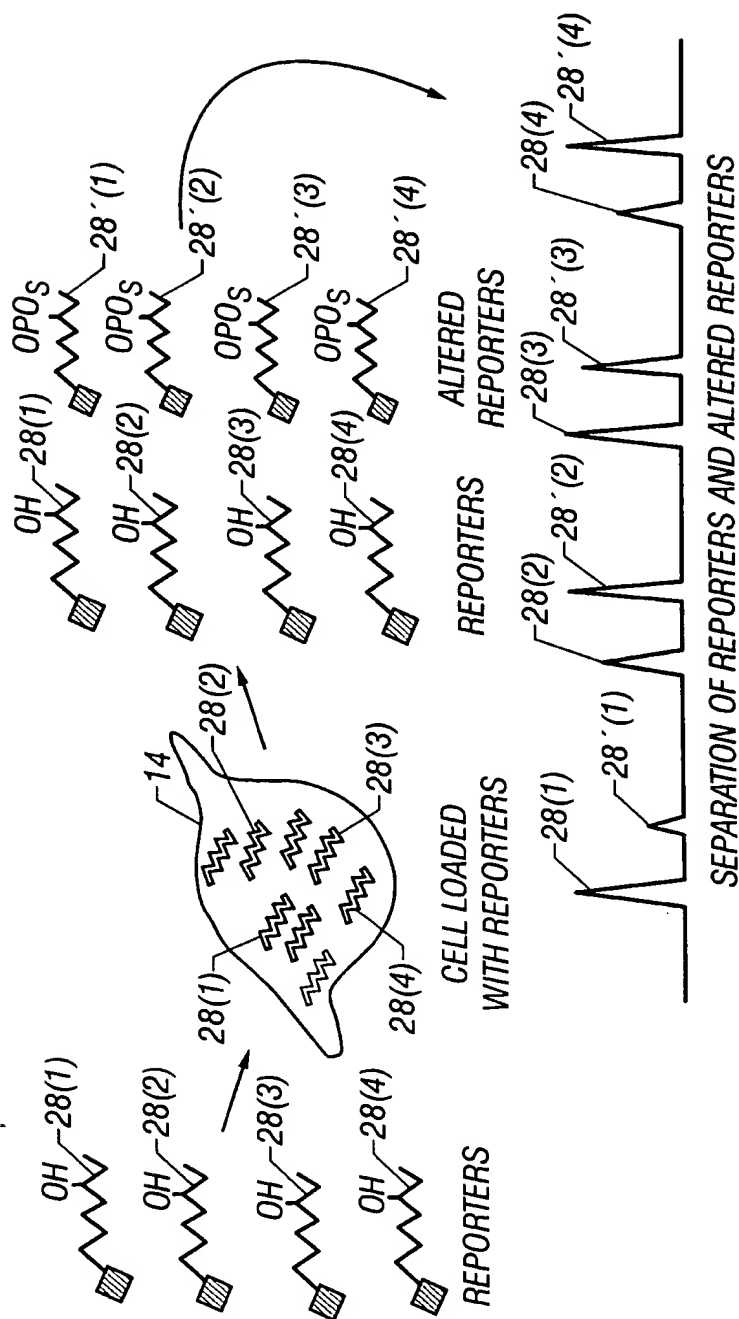


FIG. 15A

23/33

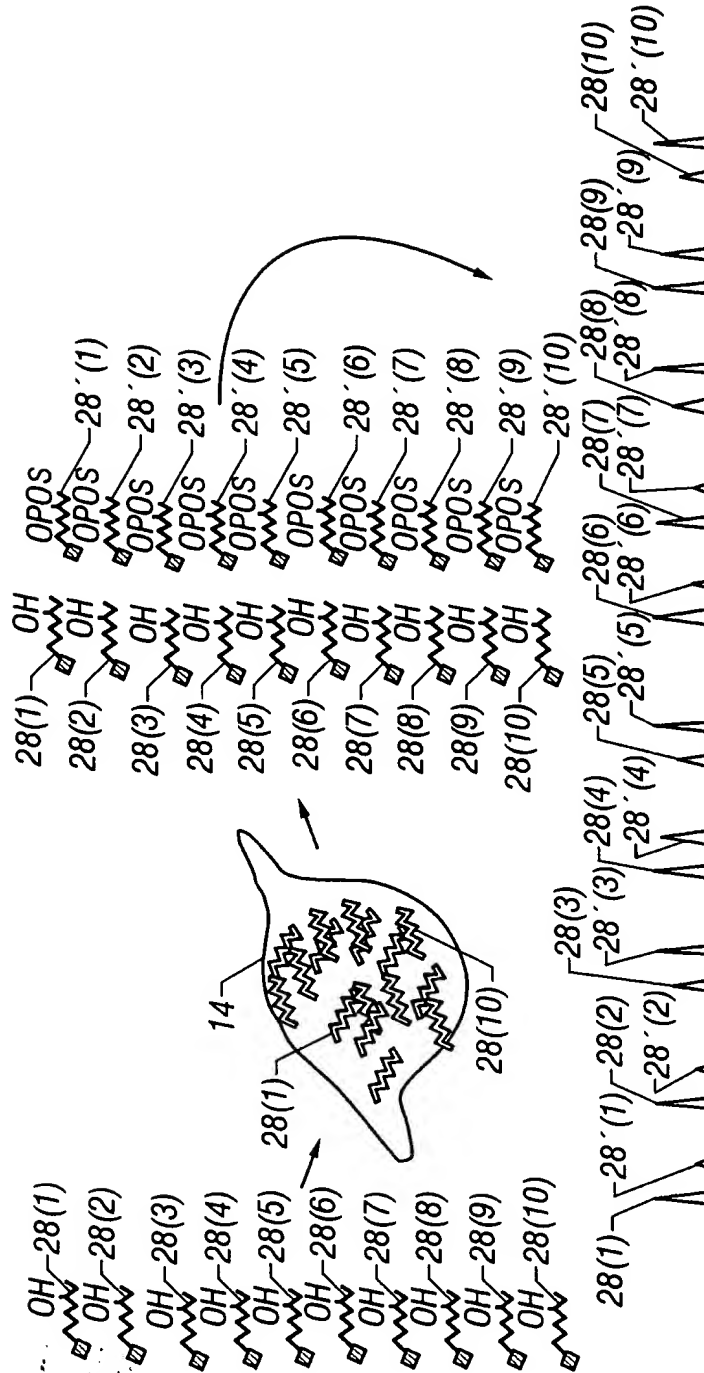


FIG. 17

25/33

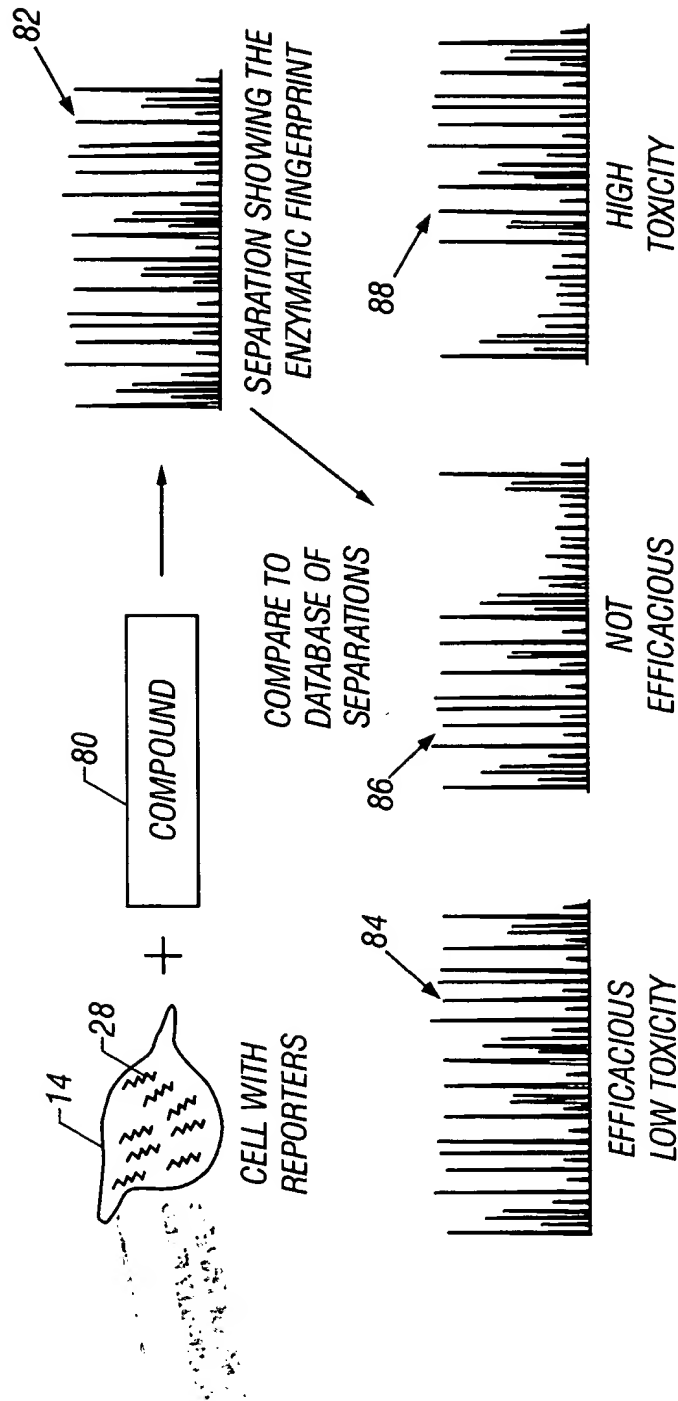


FIG. 19

26/33

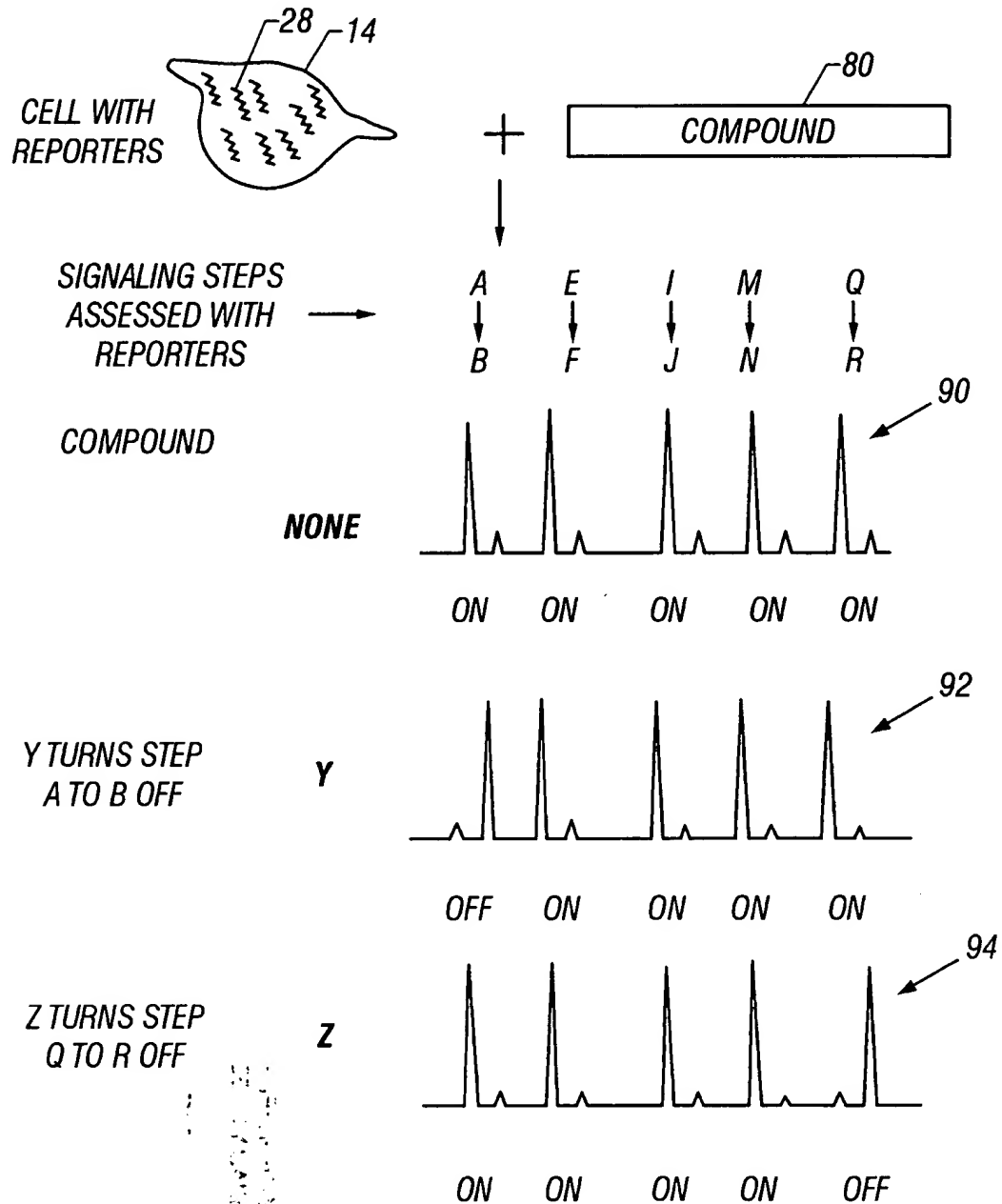


FIG. 20

27/33

•DIAGNOSTICS AND PROGNOSTICS

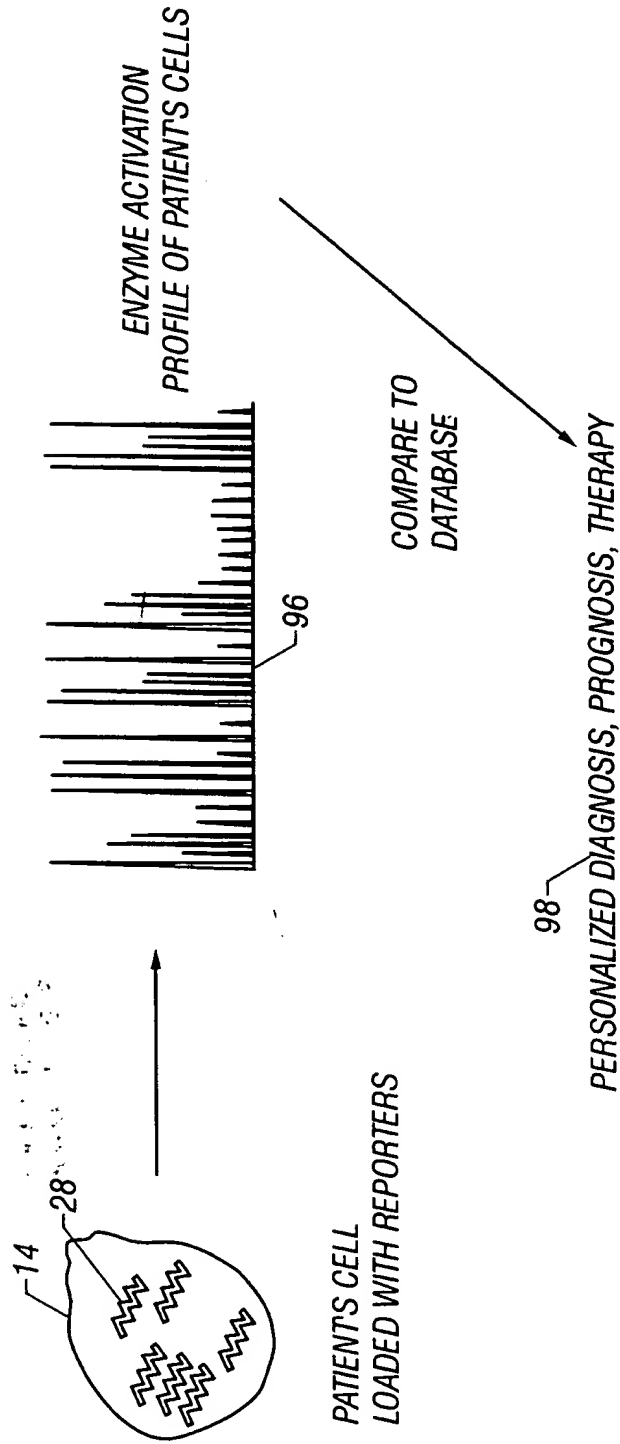
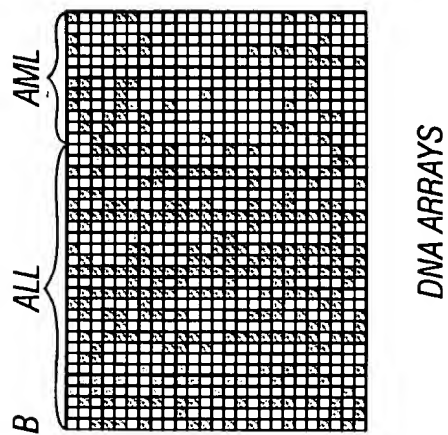
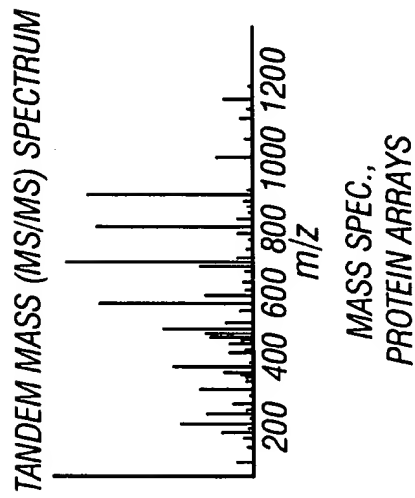


FIG. 21



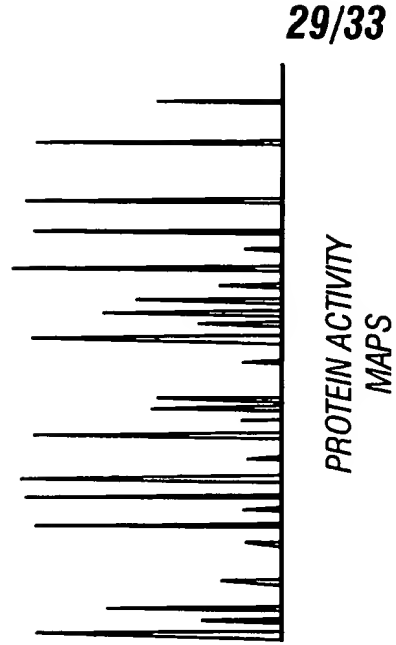
Genomics

FIG. 23A



Proteomics

FIG. 23B



Signaling

FIG. 23C

30/33

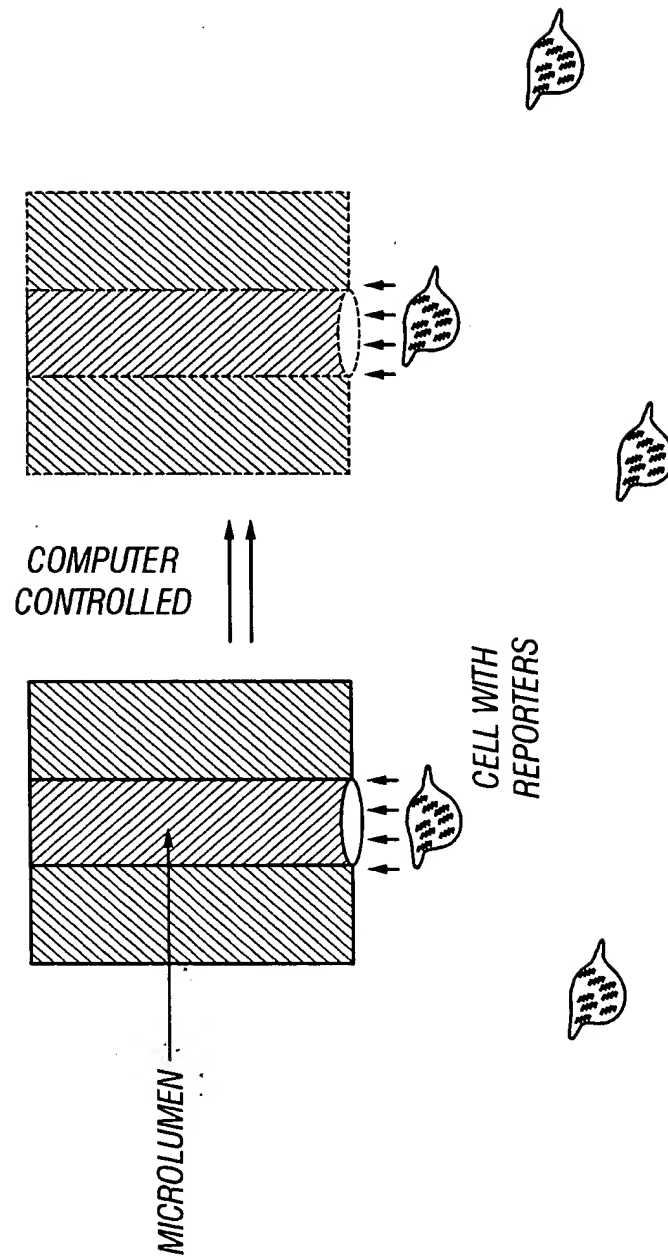
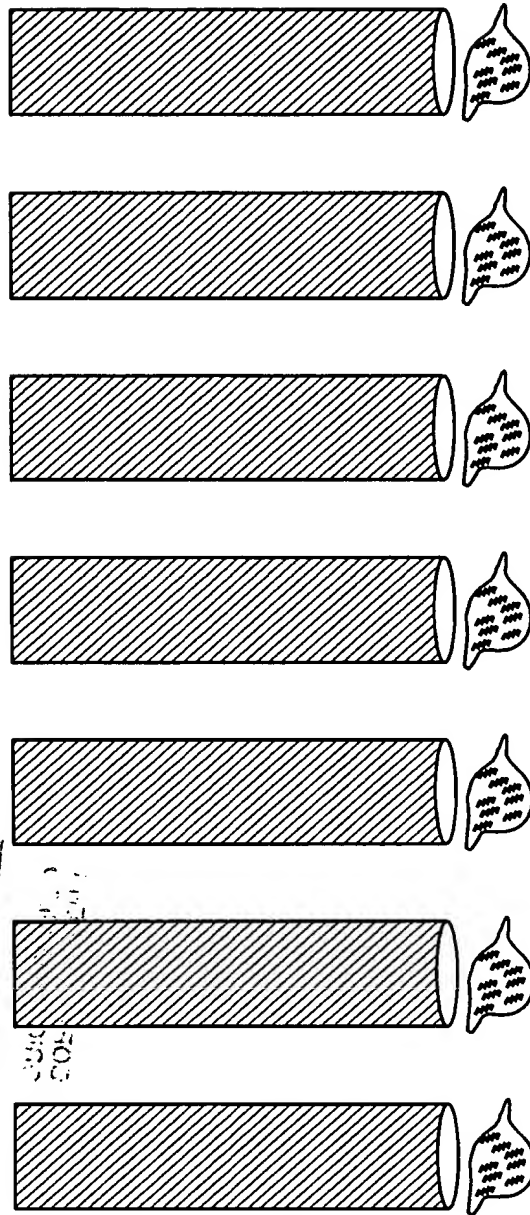


FIG. 24

31/33



COMPUTER-CONTROL OF MICROCOLUMN ALIGNMENT
OVER CELLS, LYSIS, AND/OR OTHER STEPS.

FIG. 25

32/33

TABLE I

**INFLUENCE OF THE
INTRACELLULAR ENVIRONMENT**

CELLULAR PROPERTY	IS IT THE SAME AFTER REMOVAL FROM THE CELL?
1. DNA, RNA (SEQUENCE, QUANTITY)	YES
2. PROTEIN (IDENTITY, CONC.)	LIKELY
2. ACTIVITY	USUALLY NOT

FIG. 26A-1

TABLE II

**CELLULAR PROPERTIES ARE
DISTINGUISHED BY THEIR TIMESCALES**

DNA & RNA "GENOMICS"	MINUTES - YEARS
PROTEIN "PROTEOMICS"	SECONDS - HOURS
ACTIVITY "SIGNALING"	MILLISECONDS - SECONDS

FIG. 26A-2

33/33

TABLE III

*A SAMPLING OF
AVAILABLE TECHNOLOGIES*

<i>FIELD</i>	<i>PROPERTY</i>	<i>TECHNOLOGIES</i>
1. GENOMICS	DNA, RNA	DNA ARRAYS
2. PROTEOMICS	PROTEIN IDENTITY & CONC.	PROTEIN GELS/ARRAYS MASS SPEC.
3. SIGNALING	ACTIVITY	GFP - BASED METHODS CRITICAL NEED

FIG. 26A-3